

AMENDMENTS TO THE CLAIMS

1. (canceled)
2. (currently amended) A color-filterless full color liquid-crystal display device according to Claim 1, comprising:
a liquid-crystal shutter portion including a liquid crystal; and
a backlight portion including light source units and a planar light guide,
wherein said light source units comprise at least one red light-emitting device (LED), at least one green LED, and at least one blue LED,
wherein a first number corresponding to said at least one blue LED is not smaller than a second number corresponding to said at least one red LED, and the first number corresponding to said at least one blue LED is not smaller than a third number corresponding to said at least one green LED,
wherein said light source units are disposed on an edge of said planar light guide, and
wherein the number of said blue LEDs is not smaller than the number of said red LEDs and the number of said blue LEDs is larger than the number of said green LEDs.
3. (currently amended) A color-filterless full color liquid-crystal display device according to Claim 1, comprising:
a liquid-crystal shutter portion including a liquid crystal; and
a backlight portion including light source units and a planar light guide,
wherein said light source units comprise at least one red light-emitting device (LED), at least one green LED, and at least one blue LED,
wherein a first number corresponding to said at least one blue LED is not smaller than a second number corresponding to said at least one red LED, and the first number corresponding to said at least one blue LED is not smaller than a third number corresponding to said at least one green LED,
wherein said light source units are disposed on an edge of said planar light

guide, and

wherein two red LEDs, one green LED and two blue LEDs are mounted on a substrate.

4-7. (canceled)

8. (currently amended) A color-filterless full color liquid-crystal display device, comprising:

a liquid-crystal shutter portion including a liquid crystal; and

a backlight portion including light source units and a planar light guide,

wherein said light source units comprise at least one red light-emitting device (LED), at least one green LED, and at least one blue LED,

wherein a first number corresponding to said at least one green LED is not larger than a second number corresponding to said at least one red LED and the first number corresponding to said at least one green LED is not larger than or equal to a third number corresponding to said at least one blue LED, and

wherein said light source units are disposed on an edge of said planar light guide, and

wherein two red LEDs, one green LED and two blue LEDs are mounted on a substrate.

9. (currently amended) A liquid-crystal display device according to Claim 8, wherein said backlight portion includes a planar light guide laminated on said liquid-crystal shutter portion so that said [[LEDs]] at least one red LED, said at least one green LED, and said at least one blue LED are disposed to face a side of said planar light guide.

10. (currently amended) A liquid-crystal display device according to Claim 8, wherein a reflection layer is formed on a surface of said planar light guide.

11. (currently amended) A liquid-crystal display device according to Claim 8, wherein said backlight portion includes a light emission controller for controlling light emission of

each of said ~~[[LEDs]]~~ at least one red LED, said at least one green LED, and said at least one blue LED, said light emission controller applying a current to said ~~[[LED]]~~ each of said at least one red LED, said at least one green LED, and said at least one blue LED to thereby obtain ~~[[the]]~~ a maximum light-emitting efficiency of said [[LED]] each of said at least one red LED, said at least one green LED, and said at least one blue LED.

12. (currently amended) A liquid-crystal display device according to Claim 8, wherein light is selectively emitted from each of said ~~[[LEDs]]~~ at least one red LED, said at least one green LED, and said at least one blue LED in synchronization with an ON/OFF of a corresponding one of a plurality of pixels in said liquid-crystal shutter portion.

13. (currently amended) A color-filterless full color liquid-crystal display device according to ~~Claim 1~~, wherein ~~said liquid crystal comprises, comprising:~~

a liquid-crystal shutter portion including a twisted nematic (TN) liquid crystal; and
a backlight portion including light source units and a planar lightguide,

wherein said light source units comprise at least one red light-emitting device (LED), at least one green LED, and at least one blue LED,

wherein a first number corresponding to said at least one blue LED is not smaller than a second number corresponding to said at least one red LED, and the first number corresponding to said at least one blue LED is not smaller than a third number corresponding to said at least one green LED, and

wherein said light source units are disposed on an edge of said planar light guide.

14. (currently amended) A color-filterless full color liquid-crystal display device according to ~~Claim 1~~, wherein ~~said liquid crystal comprises, comprising:~~

a liquid-crystal shutter portion including a super twisted nematic (STN) liquid crystal;
and

a backlight portion including light source units and a planar lightguide,

wherein said light source units comprise at least one red light-emitting device (LED), at least one green LED, and at least one blue LED,

wherein a first number corresponding to said at least one blue LED is not smaller than a second number corresponding to said at least one red LED, and the first number corresponding to said at least one blue LED is not smaller than a third number corresponding to said at least one green LED, and

wherein said light source units are disposed on an edge of said planar light guide.

15. (previously presented) A liquid-crystal display according to Claim 8, wherein said liquid crystal comprises a TN liquid crystal.

16. (previously presented) A liquid-crystal display according to Claim 8, wherein said liquid crystal comprises an STN liquid crystal.

17. (currently amended) A color-filterless full color liquid-crystal display device, comprising:

a liquid-crystal shutter portion including a liquid crystal; and
a backlight portion including light source units and a light guide,

wherein said light source units comprise at least one red light-emitting device (LED) ~~of a first color~~, at least one green LED ~~of a second color~~, and at least one blue LED ~~of a third color~~,

wherein a first number corresponding to said at least one blue LED ~~of said third color~~ is not smaller than a second number corresponding to said at least one red LED ~~of said first color~~, and the first number corresponding to said at least one blue LED ~~of said third color~~ is ~~not smaller~~ larger than a third number corresponding to said at least one green LED ~~of said second color~~, and

wherein said light source units are disposed on an edge of said light guide.

18. (previously presented) A liquid-crystal display device according to Claim 17, wherein said liquid crystal comprises a twisted nematic (TN) liquid crystal.

19. (previously presented) A liquid-crystal display device according to Claim 17, wherein

said liquid crystal comprises a super twisted nematic (STN) liquid crystal.

20. (canceled)

21. (previously presented) The color-filterless full color liquid-crystal display device according to Claim 17, wherein said light guide comprises a planar light guide.

22. (currently amended) A color-filterless full color liquid-crystal display device, comprising:

a liquid-crystal shutter portion including a liquid crystal; and

a backlight portion including light source units and a light guide,

wherein said light source units comprise at least one red LED ~~of a first color~~, at least one green LED ~~of a second color~~, and at least one blue LED ~~of a third color~~,

wherein a first number corresponding to said at least one green LED ~~of said second color~~ is not larger than a second number corresponding to said at least one red LED ~~of said first color~~ and the first number corresponding to said at least one green LED ~~of a second color~~ is not larger than or equal to a third number corresponding to said at least one blue LED ~~of a third color~~, and

wherein said light source units are disposed on an edge of said light guide.

23. (currently amended) A liquid-crystal display device according to Claim ~~[[20]]~~ 22, wherein said liquid crystal comprises a twisted nematic (TN) liquid crystal.

24. (currently amended) A liquid-crystal display device according to Claim ~~[[20]]~~ 22, wherein said liquid crystal comprises a super twisted nematic (STN) liquid crystal.

25. (canceled)

26. (currently amended) The color-filterless full color liquid-crystal display device according to Claim ~~[[20]]~~ 22, wherein said light guide comprises a planar light guide.

27. (new) A liquid-crystal display device according to Claim 2, wherein said backlight portion includes a planar light guide laminated on said liquid-crystal shutter portion so that said at least one red LED, said at least one green LED, and said at least one blue LED are disposed to face a side of said planar light guide.

28. (new) A liquid-crystal display device according to Claim 27, wherein a reflection layer is formed on a surface of said planar light guide.

29. (new) A liquid-crystal display device according to Claim 2, wherein said backlight portion includes a light emission controller for controlling light emission of each of said at least one red LED, said at least one green LED, and said at least one blue LED, said light emission controller applying a current to said each of said at least one red LED, said at least one green LED, and said at least one blue LED to thereby obtain a maximum light-emitting efficiency of said each of said at least one red LED, said at least one green LED, and said at least one blue LED.

30. (new) A liquid-crystal display device according to Claim 2, wherein light is selectively emitted from each of said at least one red LED, said at least one green LED, and said at least one blue LED in synchronization with an ON/OFF of a corresponding one of a plurality of pixels in said liquid-crystal shutter portion.

31. (new) A liquid-crystal display device according to Claim 3, wherein said backlight portion includes a planar light guide laminated on said liquid-crystal shutter portion so that said at least one red LED, said at least one green LED, and said at least one blue LED are disposed to face a side of said planar light guide.

32. (new) A liquid-crystal display device according to Claim 31, wherein a reflection layer is formed on a surface of said planar light guide.

33. (new) A liquid-crystal display device according to Claim 3, wherein said backlight portion includes a light emission controller for controlling light emission of each of said at

least one red LED, said at least one green LED, and said at least one blue LED, said light emission controller applying a current to said each of said at least one red LED, said at least one green LED, and said at least one blue LED to thereby obtain a maximum light-emitting efficiency of said each of said at least one red LED, said at least one green LED, and said at least one blue LED.

34. (new) A liquid-crystal display device according to Claim 3, wherein light is selectively emitted from each of said at least one red LED, said at least one green LED, and said at least one blue LED in synchronization with an ON/OFF of a corresponding one of a plurality of pixels in said liquid-crystal shutter portion.